

WHAT IS CLAIMED IS:

- sub A15
16. An assay that is non-destructive of a sample being detected comprising the steps of:
labeling said sample;
placing said labeled sample in a first chamber;
separating said first chamber from said second chamber with a permeable, detection-blocking
membrane;
measuring sample presence in said second chamber by detecting said labeled sample in said
second chamber without substantially detecting said labeled sample in said first chamber.
17. An assay of claim 16 further including the step of:
inducing migration of said labeled sample across said membrane.
18. An assay of claim 17 wherein said inducing step includes:
placing a chemical agent in said second chamber capable of creating a chemotactic reaction
with said sample.
19. An assay of claim 18 wherein said sample includes cells.
20. An assay of claim 18 wherein said labeling step includes:
labeling said cells with a dye.
21. An assay of claim 20 wherein said measuring step includes:
measuring radiation emitted by said labeled cells in said second chamber without
substantially measuring radiation emitted by said labeled cells in said first chamber.

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22. An assay of claim 21 wherein said dye is a fluorinated dye and wherein said inducing step includes:

stimulating said labeled cells in said second chamber with electromagnetic radiation of a first wavelength whereby said labeled cells emit electromagnetic radiation of a second wavelength; and
measuring said electromagnetic radiation of said second wavelength from said cells in said second chamber wherein said detection-blocking membrane is a radiation opaque member which is not substantially transmissive to at least one of said first and second wavelength of electromagnetic radiation.

23. A non-destructive sample assay comprising:
measuring sample migration across a permeable detection-blocking membrane.

24. A non-destructive sample assay of claim 23 further including the step of:
inducing migration of said sample across said membrane.

25. A non-destructive sample assay of claim 24 wherein said inducing step includes:
providing a chemotactic agent on one side of said membrane.

26. A non-destructive sample assay of claim 24 wherein said measuring step includes:
detecting sample presence on said one side of said membrane.

27. A non-destructive assay comprising:
detecting sample presence on one side of a sample-porous detection-blocking barrier without
substantially detecting sample presence on the other side of said barrier.

28. A non-destructive assay of claim 27 further including:
inducing migration of said sample through said sample-porous detection-blocking barrier.

29. A non-destructive assay of claim 28 wherein said sample migration is induced by a
chemotactic agent.

30. An assay for detecting the presence of a material which has traversed a porous membrane
comprising measuring or detecting the presence of said material which has migrated across said
porous membrane wherein said membrane substantially prevents the detection and/or measurement
of any said material which has not migrated across said membrane, and wherein said assay is non-
destructive of said material.

31. A non-destructive assay for detecting the presence of a labeled sample comprising:
a) incorporating identification means into said biological sample;
b) placing said biological sample in a first chamber, said first chamber being separated
from a second chamber by a porous radiation opaque membrane that comprises a film which is not
substantially transmissive to a detection source used to detect said identification means;
c) allowing said biological sample to migrate across said membrane in response to a
signal;
d) detecting sub populations of said biological sample in said second chamber but not
said first chamber based on the presence of said identification means.

32. The non-destructive assay of claim 31, wherein said sample is selected from the group
consisting of primary and tissue culture cells.

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33. The non-destructive assay of claim 32, wherein said identification means is selected from the group consisting of dyes, radio-active labels and magnetic labels.

34. The non-destructive assay of claim 31, wherein said sub populations are selected from the group consisting of cells, cellular products, bacteria, viruses, and viral particles.

35. The non-destructive assay of claim 34, wherein said cellular products include proteins, protein fragments, nucleic acids, and nucleic acid fragments.

36. The non-destructive assay of claim 31, wherein said signal is selected from the group consisting of chemical signals, electrical signals, electromagnetic signals and magnetic signals.

37. An assay for identifying and/or quantitating the presence of a labeled analyte from a sample comprising measuring the presence of said labeled analyte in a second chamber, wherein said second chamber is isolated from a first chamber by a porous radiation opaque membrane, wherein said membrane comprises a film which is not substantially transmissive to a detection means used to detect said labeled analyte and said assay is non-destructive of said analyte.

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